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ABSTRACT

Critics call computerized innovations and other changes in the workplace examples of the employers' "dumbing down" of jobs for illiterate workers. Others disagree and say the changes free workers from routine, monotonous tasks and permit them to learn more complex procedures and to take on more responsibility. Findings of a survey of business leaders, union officials, literacy researchers, curriculum and program designers, and others show a variety of opinions. Some see the changes as one more step in the process of "work simplification," some see them simply as labor-saving devices, and some see them as enabling companies to lower the job category to justify lower salaries. A trend toward visualization, compensation for the fact that there are fewer people to fill entry-level positions, and a process of "adjusting material to purposes" are among other theories advanced. Some argue that machines are making work more complex. The downside to all these innovations that reduce effort, increase efficiency and productivity, free the worker from repetition, and stand for general progress may be that it creates a "worker class society" of workers who cannot learn and advance. The other side argues that motivated workers can advance through management training programs. It is also argued that job simplification is useful in solving a company's short-term problem, but is a useful process only when used in conjunction with other training to reduce turnover and make maximum use of employees. (YLB)

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DUMBING DOWN OR SMARTENING UP?

A fast food chain replaces the numbers on its register with pictures of hamburgers. Copy machines throughout the country use illustrated charts instead of written instructions for changing paper or correcting minor problems. Typewriters with built-in dictionaries beep when a word is misspelled. Electronic scanners enter prices, tax, and totals at grocery checkout counters. Automatic teller machines perform a variety of transactions formerly handled only by people.

These are just a few of the many changes that are occurring in the workplace today. A vocal number of opponents and some segments of the media charge that instead of fighting illiteracy, employers are simply "dumbing down" the jobs so that workers won't have to read, write, or calculate at higher levels to perform them. Many others disagree, maintaining that the computerized innovations and other changes free workers from routine, monotonous tasks, permitting them to learn more complex procedures and take on more responsibility.

How much of what is going on is "dumbing down" and how much is "smartening up" workers?

To explore this subject, BCEL surveyed a sampling of business leaders, union officials, literacy researchers, curriculum and program designers, and others. Not surprisingly, opinions varied depending on the outlook and constituency of those surveyed. But one fact did emerge: this topic is not only extremely complex, it is just one thread in our rapidly changing economic and social fabric.

There was one area of agreement among all those interviewed: a unanimous dislike of the term "dumbing down." All parties called it misleading, inaccurate, or pejorative. Tom Sticht, President of Applied Behavioral and Cognitive Sciences in San Diego, says the expression is "very misleading and applied politically." He points out that a newspaper chain writing about the military's use of comic books as teaching materials might call the practice "dumbing down" but when they lower the reading level of their own publications, they claim it is done to make them "more accessible and rapidly readable." He stresses that "every change has to be looked at in its own context–whether it has the effect of dumbing down or smartening up, reducing motivation or increasing it. You simply can't make sweeping generalizations."

Linda Stoker, head of the Cox Educational System (see p.10) and formerly with the Polaroid Corporation, joins many surveyed in pointing out that the phrase inaccurately implies a person is "dumb" instead of unskilled at a particular task. For example, she queries, "If I spoke only French and you had to translate the questions in order to interview me, does that mean I'm dumb, or that I simply haven't learned the skill of English yet?"

What is the explanation for these changes?

Sticht observes that "in a small fraction of cases work has been simplified to accommodate less skilled people" but he sees nothing wrong with this, noting that "labor-saving devices" are used by experts and highly skilled technicians as well. Larry Mikulecky, Associate Professor of Education at Indiana University, allows that "a fraction of the cases (nobody knows what percentage) involves taking a task that would ordinarily be over the head of the worker and simplifying it so that fewer mistakes are made. It takes that 20 percent of the population that does read below the 8th grade level and makes them accessible to some kind of employment, but at a minimum wage. However, in most cases, 'dumbing down' miscommunicates what is really going on." On the other hand, Margaret Hilton, a research economist for the Communication Workers of America, says "Most of my colleagues believe that what is happening is a kind of dumbing down, that the jobs are being split up and the most complex parts given to computers or just a few workers. From the companies' point of view, the dumber they can make the jobs, the less they can pay the workers." She hastens to add, however, that "in many cases the jobs are not really dumber. They require equally demanding but different skills, but the companies use this as an excuse to lower the job category."

The majority of those interviewed believe the changes are unrelated to literacy. Allene Guss Grognet at the Center for Applied Linguistics in Washington, D.C. and Tom Sticht call it a trend toward "visualization." Grognet contends "pictures make things more explainable and make work go faster and more efficiently. Not everyone learns best by the written word." Sticht points out that "having numbers on cash registers doesn't in itself teach workers anything. They just push numbers instead of pictures." Grognet further observes: "We have to accept the fact that the world changes and because it does, many of the ways we did things before change too. I don't cook the way my mother did. She did things in many steps from scratch. I use a microwave oven. The way we use language changes as well. The world after television has to be very different from the world after the motion picture; the world that gave us automation is very different too. In many areas visualization has proved very helpful. It has been a boon to teaching language for instance. Imagine the difference between trying to describe the concept of an escalator and simply showing a video of it." Tim Himmerling, spokesman for the Burger King chain, concurs, citing the age-old adage "one picture is worth a thousand words."

Others see the changes as one more step in the inevitable process of "work simplification." "Work simplification, especially the assembly line, made the U.S. the greatest manufacturing power in the world," observes Linda Stoker. "Prior to World War II, for example, each ship was built one at a time as a complete unit rather than in parts. During the war, the assembly line was applied to heavy industry for the first time, rapidly producing a number of identical ships at the same time, known as Liberty ships. This represented a shift from individually-crafted pieces. The new process deskilled the job of shipwright, a skilled craftsman, and turned it into a bunch of little jobs that people with less training could do. It was a very efficient, swift, and effective system. It was also the beginning of a whole new way of making things at prices everyone could afford."

Stoker goes on to stress that work simplification is not synonymous with "dumbing down." "The workplace is now becoming more complex and the reason literacy is an issue at all is that formerly people who were able to do simpler jobs are now being asked to do more complex ones. The dilemma in modern manufacturing and also in industry is that work is becoming more rather than less

complex and we have in effect to smarten up rather than dumb down. There are two currents in the workplace. One is being caused by the kinds of tasks workers are being asked to do–manage a bank of computers running robotic assembly lines, read data, identify problems. Today's electronic cash registers are much more complex than the old mechanical ones. If the machine doesn't work, the checkout clerk has to make a lot of decisions and adjustments on the spot. Workers no longer have to do a lot of physical labor, but they have to do a lot more problem solving in dealing with machines when they go wrong. All the repetition is given to the machines so the human uses his or her brain more."

"The other trend is that there are fewer and fewer people as a natural resource for entry-level jobs. The general skill level is going down partly because there are fewer people coming out of school and going into the workplace and because immigration patterns have changed. People coming to the U.S. tend to be very highly skilled or unskilled."

Paul Delker, President of Strategic Educational Systems in McLean, Virginia, agrees that machines are making work more complex. "What's going on has been a trend in this country for 10 or 15 years." He points out that "calculators have not made people forget how to do basic math" and that "automatic spelling typewriters require highly literate operators who need to know syntax and spelling more than ever." For example, if a secretary using an automatic spelling typewriter types *tot* instead of *toot*, the machine won't beep because both are real words. It will beep if the typist enters a word that doesn't exist, like *thier* instead of *their*, but it won't tell the typist whether *their* or *there* is correct in the context of the sentence.

Larry Mikulecky calls the process "adjusting material to purposes." He gives an example where "the auto industry has set up an expert system so that the average auto mechanic can be almost as effective as the very best and experienced mechanic in finding rattles in cars. Basically, by responding to a series of questions that a computer generates, they're able to make decisions similar to what the person with five or six years experience can do. This certainly is not dumbing down because even to know what the questions are talking about involves a good deal of training."

Is there a downside to all these innovations that reduce effort, increase efficiency and productivity, free the worker from repetition, and stand for general progress?

Delker believes "the downside is that many workers can't advance and learn. It creates a kind of worker class society. Those people will probably eventually be eliminated because their job function will be computerized." It has been pointed out, in fact, that already automatic scanners require fewer stock people to keep track of what is on hand. Stoker and many others concur that the workforce is becoming sharply divided. "Making jobs simple ultimately polarizes the workforce into two larger and larger classes of workers whose training and background become further and further apart," maintains Stoker. "If you think of a career ladder, you're kicking technological rungs out of that ladder so you have a large pool of semi-skilled labor and a large pool of high-level labor. The dilemma of how to get from one place to another becomes much more the burden of the individual."

Markley Roberts, an AFL-CIO economist, agrees. "We're getting more a split-skill labor market with fewer workers at in-between skills levels. This is important in terms of consumer buying power and the distribution of consumer markets. It also splits up the society making it less cohesive. I'd say for 90 percent of people at fast food chains, there's no career path."

Undoubtedly, Tim Himmerling, speaking for Burger King, would strongly disagree with this contention. He points out that Burger King uses visuals for assembling sandwiches and names of items on cash registers solely for accuracy and speed. Furthermore, he indicates that the chain offers an extensive management training program. He says that "motivated individuals can start out as an hourly employee making sandwiches, become a production assistant and train other hourly employees, move on to assistant manager, and eventually go to Burger King University in Miami where trainees learn everything a manager should know. Graduates are put in charge of a whole restaurant, then might progress to district manager or a franchise manager in charge of 10 or 15 stores."

Himmerling cites the case of Evelyn Vega who was recently chosen ABC Literacy Person of the Month. An illiterate mother on welfare, she was taken on as an hourly employee by a Burger King franchise in Connecticut in cooperation with the local Literacy Volunteers of America program. While upgrading her literacy skills at LVA, she learned on the job, and is now in the management training program. Himmerling stresses that she was able to learn job and literacy skills at the same time.

What are the short- and long-term impacts of "job simplification?"

Stoker believes the technique can be useful in solving a company's short-term problem. Another short-term solution, though, is for companies to export less skilled jobs to other countries on the grounds that it is better to pay someone in the Third World much less than $10 or $15 an hour here. "But in the long run," says Stoker, "this will not meet our national needs nor will it meet a company's production needs." "Another approach is to address the skills needs of the individual. In my own view, a combination of job simplification and skills upgrading is best for the workplace in the long run."

Margaret Hilton, talking about telephone workers, says "deregulation puts pressure on the company to save every penny. Our view is that they should use employees creatively to give their customers the best possible service. The short-term benefit is the company's bottom line, but if they keep deskilling alone, workers will become bored, their motivation and attention will decline, and it will ultimately have a negative impact."

Margaret Wilke of Control Data in Minneapolis says that "We are in an industrial setting that has become more and more automated. Skills requirements for employees are escalating so we're always looking for ways to simplify work. But it's a Catch-22. If you don't simplify jobs and you don't provide people the opportunity to learn, you've got a problem. On the other hand, if you simplify the jobs but provide no opportunity for growth, you create a second-class employee. In the short-run it solves an employer's problems. In the long run it doesn't. Job simplification should be accompanied by other training to reduce turnover and make maximum use of employees. Unless you deal with the root, you're using a band-aid approach."

Delker observes that "In an electronic age there's nothing wrong with work simplification unless that's all you do. But managers must use this process so that it realizes the full potential that employees can contribute to the organization, and at the same time gives the workers full job satisfaction." A good many of those surveyed agree. ■